

REMARKS

Reconsideration of this application is requested.

Claims 1-15 are pending for consideration. Of these claims, claims 1, 2, 4, and 10 have been amended to obviate the Examiner's objections to the claims as initially presented for consideration.

New claims 14 and 15, dependent on claims 1 and 10, respectively, are drawn to preferred poly-aryl methane protecting groups disclosed at page 2, lines 34-36 of the applicants' specification. The new claims are thought to be in acceptable form. These claims are also thought to be patentable over the cited art for the reasons noted below with respect to applicants' other claims.

Claim 1 has been converted into Jepson form with the known art acknowledged in the preamble. The applicants' invention resides in the use of the indicated polymer as the support used to assemble the oligonucleotide. The polymer used by the applicants is disclosed and claimed in the commonly assigned U.S. Patent 7,365,132. Applicants' independent claims (claims 1 and 10) have been amended to define the acid-labile protecting group as "a poly-aryl methane protecting group" as in claim 1 of U.S. Patent 7,365,132. Basis for the amended language is found throughout the applicants' disclosure. See particularly, the disclosure beginning at page 2, lines 5-36.

The claims, as amended, are thought to obviate the Examiner's objections thereto. Accordingly, reconsideration of the Section 112, 2nd ¶ rejection of claims 1-13 is requested.

With respect to the Examiner's comments regarding claim 1, the applicants submit that those of ordinary skill in the art will understand how the oligonucleotide is prepared by assembly thereof attached to a solid support as recited in the Jepson-styled preamble portion of the claim. The applicants' invention is based on the finding that a polymer as defined is uniquely suitable for use in preparing oligonucleotides. Claim 1 clearly specifies that the applicants' polymer support is one prepared by polymerization of a monomer which is characterized by the protected chain. The scope of claim 1 is clear and definite and certainly understandable to one of ordinary skill in the art.

As for claim 2, the applicants do not understand the Examiner's statement that there are "no definitions for R^1 and R^5 " or "a monomer of formula (1) is indefinite". Claim 2 includes specific definitions for R^1 and R^5 . Furthermore, it is clear that the monomer referred to in claim 2 has the formula indicated. Reference to "formula (1)" has been deleted in favor of the language "monomer of the following formula:". It is submitted that the language of claim 2, both before and after the present amendment, is clear and definite.

Claim 4 has been amended to indicate that the polymer support is crosslinked. Those in the art will fully understand what this means and how it is obtained.

The reference in claim 5 to "phosphoramidite approach" has been changed to "phosphoramidite chemistry". Those in the art will fully understand what the applicants intend by the original language and the amended language, particularly in the context of the applicants' disclosure. See, for example, the applicants' specification beginning at page 8, line 36.

Regarding claim 10, the Examiner states that there is no definition of a polymerizable unit. Other objections to the claim are also raised. However, with respect, it is submitted that one in the art would have no difficulty understanding the language and scope of the claim. Thus, the claim refers to a monomer comprising a protected hydroxypoly C_{2-4} alkeneoxy chain attached to a polymerizable unit. There can be no doubt what is meant by "attached", in the mind of one in the art, i.e. the specified chain is linked or connected (attached) to a unit which is polymerizable and all of this is the monomer referred to.

The protecting group has been more specifically defined in claim 10. This should obviate the basis for the Examiner's objections in the sentence bridging pages 2-3 of the action. The definition of Q has also been amended in a way which is believed responsive to the Examiner's comments on page 3, lines 3-6 of the action.

The applicants do not understand the Examiner's other comments regarding claim 10. The Z substituent is defined, in one embodiment, as a cleavable linker. This is certainly clear and definite to one in the art. Furthermore, it is believed that the reference in claim 10 to a composition having the indicated formula is appropriate and certainly definite. The Examiner has not given any reason to indicate the contrary.

For the reasons noted, the applicants request the Examiner to reconsider and withdraw the Section 112, 2nd ¶ rejection of the claims. The claims, particularly as amended, are thought to be clear and definite and fully understandable to one of ordinary skill in the art.

The Examiner is also requested to reconsider the Section 103(a) rejection of claims 1-13 as unpatentable over Main (WO 00/02953) in view of Reddy et al. (U.S. 5,869,696). The Main reference does not disclose or suggest the polymer support called for in the applicants' claims, notably a polymer containing the indicated chain protected by a poly-aryl methane protecting group. This was recognized by the Examiner in allowing the commonly assigned U.S. 7,365,132 over Main. See, in particular, the attached declaration which was submitted in the prosecution of U.S. 7,365,132 in response to rejection based on Main's WO disclosure. It has, therefore, been recognized that the applicants' polymer support is not disclosed by, or obvious from, Main. Furthermore, the Examiner's secondary reference does not fill in the indicated deficiency of Main. Accordingly, even if the Examiner's references are considered together, the applicants' invention cannot result.

Consistent with the foregoing, the applicants submit that their claims define subject matter which is not obvious from the Examiner's references. Accordingly, reconsideration of the Section 103(a) rejection and withdrawal thereof is requested.

Favorable action is thought to be in order and is requested.

Respectfully submitted,

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